Minutes (Draft)
Scientific Advisory Committee Meeting
February 7, 2006 at 9:00 a.m.
DFS Central Laboratory, Classroom 1

Committee Members Present:

Dr. Jose Almirall
Dr. Frederick Bieber
Mr. Joseph Bono, Chair
Dr. Dale Carpenter
Mr. Dominic Denio
Dr. Arthur Eisenberg
Dr. Paul Ferrara
Ms. Jo Ann Given
Dr. Dan Krane
Ms. Demris Lee
Dr. Kevin McElfresh
Dr. Alphonse Poklis
Mr. Kenneth Smith

Staff Members Present:

Wanda Adkins, Office Manager
Jeff Ban, DNA Section Chief
Dave Barron, Central Laboratory Director
Ann Davis, Forensic Scientist Supervisor, Firearms Section
Katya Herndon, Counsel
Linda Jackson, Forensic Scientist Supervisor, Controlled Substances Section
Melissa Kennedy, Forensic Scientist Supervisor, Breath Alcohol Section
Josh Kruger, Forensic Scientist Supervisor, Trace Evidence Section
Alka Lohman, Breath Alcohol Section Chief
Pete Marone, Director of Technical Services
Dave Martin, Controlled Substances Section Chief
Mike Moore, Questioned Documents Section Chief
Charlie Oates, Committee Secretary
Steve Sigel, Deputy Director
Robert Steiner, Forensic Scientist, Controlled Substances Section

Call to Order

Mr. Bono called the meeting to order.

Adoption of Agenda

Dr. Poklis made a motion for the Committee to adopt the draft agenda. The motion passed unanimously.

Adoption of Minutes

Mr. Bono asked if there were any amendments to the draft minutes from the Committee meeting held on November 29th and 30th of 2005. Dr. Krane asked that the names of the Committee members be listed in alphabetical order. Dr. Krane also asked that the complete reference to the paper that he distributed at the November meeting be included in the minutes.

Ms. Given made a motion that the Committee adopt the minutes as amended. The motion passed unanimously.

Committees Duties and Responsibilities

Mr. James Towey, Assistant Attorney General, gave a presentation on what the Committee's duties and responsibilities are under the statute. Mr. Towey explained the difference between the Forensic Science Board and the Scientific Advisory Committee. The Forensic Science Board is a policy board, while the Scientific Advisory Committee is an advisory board that provides advice and comment to the Forensic Science Board.

Mr. Towey outlined the functions of the Scientific Advisory Committee as stated in §9.1-1113, explaining that all actions taken by the Scientific Advisory Committee must be derived from one of these subsections of §9.1-1113.

Pursuant to subsection A, the Committee has the authority to review laboratory operations of the Department and make recommendations concerning the quality and timeliness of services furnished to user agencies. Laboratory operations include protocols and procedures. This authority is not case specific, but may require a review of a random sample of cases.

Pursuant to subsection B, the Committee has the authority to review and make recommendations concerning new scientific programs, protocols, testing methods, plans for new programs, improving existing programs, eliminating unnecessary programs, protocols for testing, examination methods, guidelines for the presentation of results in court, and qualification standards for Department scientists.

Pursuant to subsection C, the Committee has the power to review analytical work, reports, and conclusions of Department scientists upon the request of the Director of the Department, the Forensic Science Board, or the Governor. The Committee may also recommend to the Board a review process for the Department to use when there are allegations of misidentification or testing errors. Mr. Towey stressed to the Committee that this subsection limits its authority to review specific cases to those cases it is requested to review by the Director, the Board or the Governor.

Mr. Towey suggested that whenever the Committee takes action, the Committee should cite the subsection of §9.1-1113 that grants the Committee the authority to take the action.

Mr. Bono directed the attention of the Committee to a letter he received requesting the Committee to investigate the way that DNA testing was performed and the way that test results were presented in two specific cases. Mr. Bono suggested and Mr. Towey confirmed, that the letter had to be referred to the Board. Mr. Bono reiterated that any case specific request had to come from the Governor, the Director of the Department of Forensic Science, or the Forensic Science Board. Mr. Bono stated that he would present the letter to the Forensic Science Board.

<u>New Programs, Technologies, and Equipment</u>

Mr. Ban gave a report on the status of the new mitochondrial DNA program. Mr. Ban showed the Committee a layout of the projected lab space for the program. One of the issues Mr. Ban addressed was the difficulty in finding qualified applicants for the mitochondrial DNA section supervisor position. Dr. Eisenberg explained that Mr. Ban's difficulty in finding qualified applicants could be attributed to the fact that there is a small pool of individuals who have done mitochondrial DNA analysis in a forensic setting.

Mr. Ban also gave a presentation on a future nuclear DNA technology being researched by the Department. He explained the Department's involvement in the research of Dr. Richard Mathies' microfabricated capillary array electrophoresis. He explained that the new technology uses less sample and gel, which correlates to less cost. The new technology can do 96 samples in an hour, while the current technology would take 2.5 times more time to do the same number of samples. The new technology is also amenable to automation.

Mr. Steiner gave a presentation on the DART (Direct Analysis in Real Time) instrument including its potential uses by the Controlled Substances Section. DART is an ion source attached to an accurate mass time-of-flight mass spectrometer, which enables immediate, direct detection of chemicals on surfaces and in gases, liquids, and solids without sample preparation. There was general discussion on whether the DART would replace or be in addition to the current technology used by the Department. Mr. Steiner explained that the DART would be used to supplement the current technology.

Ms. Lohmann presented an overview of the Breath Alcohol Section. She noted that the Department currently uses the Intoxilyzer 5000 and that it is pursuing new instruments because of the age of the existing instruments and the increased difficulty in finding replacement parts for these instruments. The Department is evaluating the following instruments: Alcotest 7110 MKIII C, the DataMaster DMT, the EC/IR II, and the Intoxilyzer 8000.

Mr. Bono reminded the Committee that unless any Committee member voiced an objection, the Committee was giving a "pro forma" endorsement to the Department to

continue the research of the technologies presented to the Committee. No objections were noted.

Review of Old Serology Case Files

Mr. Marone gave an update on the review that the Department has undertaken of old serology case files to determine which files contain human biological evidence. In reviewing an old file at the request of the Innocence Project several years ago, Dr. Ferrara discovered swabs/cuttings that were taped to a serologist's worksheets. DNA testing of the swabs/cuttings eliminated the defendant convicted in the case. Subsequently, the Governor ordered the Department to conduct a review of 10% of the serology files worked while the practice of retaining swabs/cuttings in the files was being used by some Department examiners (1973 – 1988). This initial review resulted in DNA testing that exonerated two defendants. As a result, the Department is conducting a full review of the remainder of the files from that time period (an estimated 600 boxes containing some 160,000 files). The Department has three part-time employees reviewing the files. They have gone through 60 boxes and have found approximately 800 case files that contain evidence; however, just over half of the 800 have listed suspects. All files containing evidence are being entered into a database. Files that contain evidence and have listed suspects will then be reviewed to cull those containing all samples necessary for testing (evidential and known victim/suspect samples). Subsequently, those files where it is determined the listed suspect was convicted will be sent to a private laboratory for DNA testing. This testing will be done on a rolling basis with files being sent once they have met all screening criteria.

There was general discussion on what procedures are in place in the Commonwealth regarding the preservation of evidence. The Committee asked Ms. Herndon to give a presentation at its August meeting on legislation and procedures in place in the Commonwealth on the preservation and storage of evidence.

Legislation

Ms. Herndon presented a summary on legislation affecting the Department that is before the General Assembly. One bill discussed, Senate Bill 286, provides that all DNA analyses offered as criminal evidence shall have been performed by laboratories certified to perform such analyses. Ms. Herndon noted that this bill was carried over until next year by the Senate Courts of Justice Committee with an indication that the Courts Committee was interested in feedback from the Department's advisory and policy boards on this issue. In light of the bill being carried over, the Committee elected to have discussion of the bill put on the agenda for its August meeting.

Department of Forensic Science Procedure Manuals

Mr. Marone advised the Committee that all Department of Forensic Science Section Procedure Manuals were on the Department's website. Both Dr. Krane and Mr. Bono applauded the Department for putting the Procedure Manuals online.

Qualification Standards

Mr. Marone provided the Committee with sample Employee Work Profiles for a DNA Examiner, a DNA Supervisor, a Latent Print Examiner, and a Latent Print Supervisor to review. He advised the Committee that the Department was open to comments or suggestions regarding these profiles.

Gun Shot Residue Language Reporting

Mr. Kruger gave a presentation on proposed gun shot residue report language. The proposed changes were based on information presented at a symposium hosted by the FBI addressing how the forensic science community was reporting gun shot residue results. The primary changes involved adding qualifier statements to the reports to try to address some of the questions that are often asked of the examiners in court. The new language was designed to result in easier and clearer presentation of the results, reports that are more up to date, and a reduced need for court testimony by examiners.

Dr. Almirall suggested that rather than only relying on the symposium, the Committee should also look at the language that the American Society for Testing Materials (ASTM) has already established and published. The Committee decided to table the issue until its August meeting so that the report from the symposium, which had yet to be published, could be reviewed along with the ASTM guidelines in order to make a more informed decision.

Drug Sampling and Reporting Protocols

Mr. Marone gave a presentation on the Department's proposed revisions to its drug sampling and reporting protocols in order to meet new SWGDRUG (Scientific Working Group for the Analysis of Seized Drugs) recommendations that will be published later this month. The revised procedures apply to all non-marijuana cases and treat simple possession and distribution cases differently. They are designed to ensure the reports accurately reflect the work being done by the laboratory and to maximize efficiency by conducting only that analysis necessary for successful adjudication. For simple possession cases, only one specimen from a large number of samples of similar appearance will be analyzed and a gross weight will be obtained that includes the innermost packaging. For distribution cases with five or less specimens, all five will be analyzed and weighed (approximately 85% of all submissions in 2005 fell under this category). For distribution cases with more than five specimens, only five will be analyzed and weighed. If more than five require analysis for successful prosecution, additional analysis will be conducted upon written request from the Commonwealth's Attorney. Resubmissions will be given high priority. For cases where there is a weight threshold in the statute or the sentencing guidelines, enough samples will be weighed and analyzed to reach the threshold.

Mr. Bono praised the Department for its proposal, commenting that it will be doing much more than what a lot of other laboratories are doing. Mr. Bono also commented that he

thought the Department's proposed changes to its drug analysis and reporting protocols were very valid. He proposed to advise the Board that the Committee concurred with the Department's proposed drug sampling and reporting changes. There were no objections from the Committee members.

Use of Random Samples in DNA Cases

Mr. Ban gave a presentation on the Department's decision to eliminate, effective January 2005, the use of random samples from its DNA procedures. The Department began to use fluorescent STR technology for analysis of offender samples in 1997 and for casework in 1998. As a carry-over from the RFLP DNA technology, and since the STR technology was new, a "random sample" was incorporated as an internal control to monitor the various stages of the process. Random sampling also served as a continual check on the success of the upload of DNA profiles into CODIS (the Combined DNA Index System). The random sample served a third purpose in acting as a blind test for the examiners, because the DNA profile was unknown to the examiner and had to be verified by the Forensic Biology Program Manager or the Laboratory Director. However, the use of the random sample in this capacity became redundant once all DNA examiners began participating in regular proficiency testing, and the use of this sample far exceeded the requirements established under the FBI's quality assurance standards for DNA testing. Due to the experience gained and the confidence in the STR technology, as well the evolution of the CODIS software, it was decided that there was no benefit to continue to utilize the random samples for casework. There was general discussion by the Committee regarding the use of random samples. The Committee gave consensus support for the Department's elimination of random samples.

Public Comment

Mr. Bono asked if any members of the public wished to address the Committee. Steve Benjamin, a defense attorney and member of the Forensic Science Board, addressed the Committee.

Next Meeting

The Committee scheduled its next meeting for August 8, 2006 at 9 a.m.

Adjourn

The Meeting Adjourned at 1:35 p.m.